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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,143	07/22/2005	Tae-Song Kim	KIST.2120.0001	7804
89980	7590	05/24/2011		
NSIP LAW P.O. Box 34688 Washington, DC 20043			EXAMINER CANDLER, SAMUEL M	
			ART UNIT 3779	PAPER NUMBER
			NOTIFICATION DATE 05/24/2011	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/543,143

**Applicant(s)**

KIM ET AL.

**Examiner**

SAMUEL CANDLER

**Art Unit**

3779

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 March 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-14 and 39-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-14, 39 and 41-46 is/are rejected.
- 7) ☐ Claim(s) 40, 47 and 48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. This office action is responsive to the amendment filed on 3/11/2011. As directed by the amendment: claims 1, 3, 4, 6, 8, 14, 39, 43 and 44 have been amended, and claims 47 and 48 are new. Claims 1, 3-14 and 39-48 are presently pending in the application.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-10, 13, 39 and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brockway et al (U.S. PGPub 2002/0138009) in view of Spaude et al (U.S. Patent No. 5,811,897).

4. Re claims 1, 3, 13, 39 and 43-46, Brockway et al discloses a sensor 400 (see paragraph [0055]; Figure 4) having first and second electrodes 405a-b (see paragraph [0055]; Figure 4) between which an electrical potential difference is generated (see paragraph [0023]) through supply of a current (see paragraph [0052]) and from which a current flows through the human body to a receiver 410 (see paragraphs [0022] and [0055]; Figure 4) installed on the surface of the human body, a coding circuit (pressure sensor – see paragraphs [0049] and [0052]), and a switching circuit 310 (see paragraphs [0050]-[0053]) that causes data transmission in response to an output from

the coding circuit and controls the output of the transmitting electrodes to be transmitted to the outside of the human body (communication circuit 310 transmits pressure information in response to the pressure sensor receiving the pressure information); however, Brockway et al fails to disclose switching between a "first state" and a "second state" of two transmitting electrodes for the purpose of transmitting a signal by a conduction current. Spaude et al teaches a switching system 10 (see col. 3 lines 16-43; Figure 1) capable of applying a higher electrical potential to either one of a first or second transmitting electrode (constituting a "first state" and a "second state") for the purpose of transmitting a signal by a conduction current (see col. 4 lines 32-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the device in Brockway et al's reference, such that an intrabody conduction current is used to transmit a signal and transmitting electrodes are able to switch between a "first state" and a "second state," as taught and suggested above by Spaude et al, for the purpose of securing a signal transfer against noise and other manipulations (see col. 5 lines 20-30).

5. Re claim 5, Brockway et al discloses wherein the electrodes are transmitting information of a separate electrical medical device which would contain an internal circuit (see paragraph [0054]).
6. Re claims 4 and 6, Brockway et al discloses wherein the electrodes are insulated from each other (see paragraph [0053]).
7. Re claims 7-10, Brockway does not explicitly disclose any structural location for the electrodes on the sensor device. However, Brockway et al does state that

'structural, logical and electrical changes may be made without departing from the spirit and the scope of the present invention.' It is not shown that any disadvantage would be provided by simply reshaping or moving the electrodes and would therefore be obvious to place the electrodes of Brockway in different structural locations on the sensor device. Additionally, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place the electrodes to cover the ends of the sensor, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

8. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brockway et al in view of Spaude et al and in further view of Bashiri et al (U.S. Patent No. 6,165,178). Brockway et al discloses that the transmitting electrodes are insulated from each other on the sensor but fails to disclose the details of the materials of the insulating means. Bashiri et al teaches using polyethylene and parylene as electrically insulating materials (see col. 5 lines 35-40). Therefore, it would have been obvious to one of the skill in the art at the time of invention to 'fill in the gaps' of the device of Brockway et al with the details of the device of Bashiri et al.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brockway et al in view of Spaude et al and in further view of Yoshioka et al (U.S. Patent No. 5,651,869). Brockway et al discloses an electrode which would be made of a conductive material, but he fails to disclose the details regarding the materials of the electrode. Yoshioka et al discloses using gold as an electrical contact and that it is known in the art (see col. 4 lines 9-13). Therefore, it would have been obvious to one of

the skill in the art at the time of invention to 'fill in the gaps' of the device of Brockway et al with the details of the device of Yoshioka et al.

10. Claims 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brockway et al in view of Spaude et al and in further view of Holmes et al (U.S. Patent No. 4,267,415). Brockway et al discloses the communication circuit operating using a very low current conducted through the body to the remote receiver (see paragraph [0053]) but fails to disclose the details of how a low current is achieved. Holmes teaches a current limiting circuit that includes a resistor with a capacitor in parallel (see col. 3 lines 28-35; Figure 1). Therefore, it would have been obvious to one of the skill in the art at the time of invention to 'fill in the gaps' of the device of Brockway et al with the details of the device of Holmes et al.

### ***Response to Arguments***

11. Applicant's arguments filed 3/11/11 have been fully considered but they are not persuasive.

12. Regarding the Arguments concerning the deficiencies of Spaude, the Examiner respectfully disagrees. The Applicant states that Spaude fails to teach or suggest supplying conduction current from a transmitting electrode having a higher electric potential to flow the current through the surface of the human body and sinking the current to the second transmitting electrode having a lower electric potential. First, Spaude is merely meant to teach the "conduction current" element and the switching between a "first state" and a "second state" as defined by the claims – not the generic flow of current between first and second transmitting electrodes (Brockway already

clearly cites inducing a current which, by current's common definition, would require a flow from a relatively high-voltage source to a relatively low-voltage source – i.e., Brockway already shows flow as described in the "first state"; see paragraph [0023]; Figure 4). Second, Spaude clearly shows a "conduction current" as the relationship between the electrodes as described by Spaude is nearly identical to the relationship of the claimed electrodes in the present application. Spaude clearly suggests a first set of electrodes having a higher electrical potential than a second set of electrodes, wherein a current flows between the first set of electrodes and the second set of electrodes (see Spaude col. 4 lines 32-65). Third, Spaude teaches a switch 10 (see col. 3 lines 16-43) which would allow either of electrodes 6, 7 to operate with a "high" electrical potential while the other electrode operates with a "low" electrical potential.

#### ***Allowable Subject Matter***

13. Claims 40 and 47-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMUEL CANDLER whose telephone number is (571)270-3410. The examiner can normally be reached on Monday - Friday, 8 a.m. - 5 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Sweet can be reached on 571-272-4761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SAMUEL CANDLER/  
Examiner, Art Unit 3779

/John P Leubecker/  
Primary Examiner, AU 3779